1024 pressure levels). These test were implemented on a graphic tablet (Wacom Intuos) with the specialized software. The length and time of drawing, the average and maximum speed of drawing, the average and maximum momentary speed, the amplitude and frequency (with FFT spectrum analysis) of hand tremors were measured.

Results Statistical analysis of the graphomotor signal revealed differences between the AD group and the C group with respect to various parameters. The largest differences have been observed in partially automated skills such as signature, and not drawing shapes (lines, spiral, etc.). The average speed of signature and maximum momentary speed of signature is lower in the AD group.

Conclusions This method allows for quantitative and objective measurement of the biophysical signal and assessment of the graphomotor skills.

Disclosure of interest The authors have not supplied their declaration of competing interest.

EV0762

The diagnostic value of saccadic profile in Alzheimer's disease

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Introduction Appearing in the early stages of the disease pathological changes in different parts of the brain in Alzheimer's disease (AD) subjects cause disruption of neural circuits between the cortex and the basal ganglia. It may affect the ocular movement disturbances.

Objectives In previous studies we have shown that AD patients present abnormalities of saccadic eye movements. In this study, we conducted for the first time the advanced quantitative analysis profile of saccades on a large study group.

Aims The aim of this study is to find the features and the values of parameters in patients with AD differ from healthy individuals using quantitative measurement methods that could help in the future to differentiate people with an uncertain diagnosis.

Methods Seventy-one patients with mild and moderate AD (age 79.1 ± 5.21) were examined. Forty-four healthy ones (C) without symptoms of dementia, matched for sex, age and education level (age 78.3 ± 4.7) were examined. In this study we made use of the Saccadometer Advanced (ACI, Cambridge, UK), allowing the measurement of eye position with the time resolution of 1 ms (1000 Hz).

Results Statistically significant differences between AD and C groups were found ($P < 0.05$). The analysis of saccadic profile allows to differentiate Alzheimer's disease. The rising slope duration and the rising slope percent is lower in AD group, but the falling slope duration and the falling slope percent is larger in AD group.

Conclusions AD patients have much smaller slope in the rising phase of the saccade. The results show that the use of saccadometry may improve diagnosis of the AD.

Disclosure of interest The authors have not supplied their declaration of competing interest.

EV0763

Quality of life and depression in caregivers of patients with cancer

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Background Most elderly patients, with cancer are cared for, by a family member who may be affected by various stressors that can influence their health and quality of life (QOL).

Objectives To explore depression, quality of life and its related factors among caregivers of elderly patients with cancer.

Methodology This is a descriptive and analytical cross-sectional study including 40 primary caregivers of old patients aged 65 or older, with cancer in oncologic radiotherapy service in university hospital Habib Bourguibain Sfax, Tunisia. The short form health survey (SF-36) and Beck inventory (13 items) were used to assess respectively QOL and depression.

Results The average age of caregivers was 44.62 years. The sex ratio (M/F) was 0.9. Most of caregivers (75%) had impaired QOL (score < 66.7). The two main components of SF-36 were altered with a standard score of 45 for the physical component and 41.1 for mental component. According to Beck inventory, Depression was present in 67.6% of cases. Impaired QOL of life was significantly correlated with somatic illnesses in the caregiver ($P = 0.016$), advanced stage of cancer ($P = 0.01$), financial difficulties ($P = 0.04$), the non-cohabitation with the patient before the disease ($P = 0.031$) and depression ($P = 0.00$).

Conclusion According to our study, caregiving can have a negative effect on the caregiver's mental and physical health. Assistance and information from healthcare professionals are the key to improving the ability of caregivers to cope with caring for older patients with cancer.

Disclosure of interest The authors have not supplied their declaration of competing interest.

EV0764

Pain assessment in people with dementia

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Introduction Assessing and quantifying the experience of pain in elderly with cognitive impairment is particularly challenging and important.

Objectives To describe the overall profile and to identify the prevalence and characteristics of pain among demented elderly.

Methods A descriptive study including 60 institutionalised elderly aged 65 and older in the retirement home, Sfax, Tunisia. Data collection was conducted using questionnaire exploring socio-demographic and medical data. Mini-mental state examination (MMSE) and Katz index of independence in activities of daily living (ADL) were used to assess respectively mental status and dependence for ADL. Verbal Descriptor Scale (VDS) and elderly behavioural scale (ECPA) were used to evaluate pain. Thirty-two elderly were included and the inclusion criteria were: Age ≥ 65 and MMSE score ≤ 20.

Results The average age of cognitively impaired residents was 74.2 years with a slight male predominance (57%). They were mostly illiterate (83%) and 56.3% of subjects were single. Almost two-thirds were admitted voluntarily and the average length of stay was 4.8 days. The ADL scale has shown that 65.6% were dependent. According to the VDS, the majority of demented subjects (93.8%) did not feel and express pain, 3% of residents with dementia had mild pain, 2.2% had moderate pain and 1.1% had severe pain. Whereas, the hetero evaluation (ECPA) concluded that 72% of demented elderly actually had pain with severe pain in 18.8% of cases.

Conclusion Pain in elderly persons with dementia is a significant problem. This underlines high needs of research as well as excellent implementation concepts for assessment and treatment of pain.
Disclosure of interest. The authors have not supplied their declaration of competing interest.

EV0765

Depression in elderly patients with schizophrenia

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Background The presence of depressive symptoms impacts negatively the lives of patients suffering from schizophrenia-spectrum disorders. Likewise, the treatment poses many challenges for clinicians.
Objectives To specify the profile of elderly with schizophrenia and to evaluate the prevalence of depression and its related factors.
Methods A descriptive and analytic study involved 40 elderly patients aged 65 and over with DSM-5 diagnoses of schizophrenia or schizoaffective disorder, followed to the outpatient psychiatry department of Hedi Chaker University Hospital, in Sfax, Tunisia, during the two months of September and October 2015. Positive and negative syndrome scale (PANSS) and Calgary depression scales were used to assess respectively the symptoms of schizophrenia dimensionally and depression.
Results The majority of our patients was male (62.5%), single (55%), with low school and socioeconomic level. The mean duration of disease was 45 ± 6.02 years and patients were mostly (90%) in classical neuroleptics. The scale of PANSS showed the predominance of negative symptoms (67.5% of cases). In addition, according to Calgary scale, depression was found in 25% of patients. Factors positively correlated to depression were: the female sex among single ($P = 0.043$), absence of family support ($P = 0.001$), treatment with conventional neuroleptics ($P = 0.039$) and negative symptoms ($P = 0.001$).
Conclusion Depression in patients with schizophrenia is far from exceptional. It is often difficult to diagnose due to the recovery of other symptoms.
Disclosure of interest The authors have not supplied their declaration of competing interest.

EV0766

Pupillometric assessment of cholinergic functioning in people with Alzheimer disease: A study from India

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Background Diagnosis of Alzheimer disease is mainly clinical, based on longitudinal history and clinical criteria due to lack of specific biochemical tests and neuroimaging studies. Deficient central cholinergic activity of AD pathology is said to be reflected as decreased peripheral cholinergic activity. Assessing peripheral cholinergic function with pupillometer for diagnostic and prognostic purpose may be beneficial, as it may be a non-invasive, acceptable, and easily administered diagnostic tool if proven so.
Method This is a single point case control pilot study with sample size of 45 (25 AD patient and 20 controls). CAMDEX-R based

interview, HMSE, and DSM-IV criteria were used for detailed assessment and diagnosis. The pupillometric parameters (Horizontal and vertical diameters of pupil) were measured by Oasis Colvard pupillometer (SKU-0401A) under three conditions namely after 5 minute of dark adaptation in dark room (PD-5min-DA i.e. Baseline PD); after 5 minutes (PD-5min-T) and 15 minutes (PD-15min-T) of instillation of 2–3 drops of 1.0% Tropicamide.
Results There was no difference in baseline pupil diameter (horizontal + vertical) of AD patients and age matched healthy controls. 1% tropicamide induced significant increment in pupil diameters from baseline to after 5 ('PD-5min-T') and 15 minutes ('PD-15min-T') of its instillation in both AD patients and age matched healthy controls. But tropicamide induced increment in pupil diameters were approximately equal in cases and controls.
Conclusion The study did not find the role of 1% tropicamide induced pupillary hypersensitivity in AD patients for diagnostic purpose.
Disclosure of interest The authors have not supplied their declaration of competing interest.

EV0767

The burden of caregivers of patients with Alzheimer

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Introduction The Alzheimer's patient assistance relationship is a morally painful experience, most frequently discussed in terms of "burden" in the literature, especially as professionals and institutional intermediaries are underdeveloped in Tunisia.
Goal It is intended to assess the level of burden among caregivers of patients with Alzheimer's disease and to search factors associated with a high level of burden.
Methodology This is a retrospective descriptive study. Patients were recruited from neurology department of Razi hospital, which were hospitalised between the months of December 2012 and March 2013. The burden was measured using the Zarit inventory.
Results and discussion Thirty patients were included. The majority female, most caregivers are descendants (60%), then, daughters in law (33%), and finally the spouses (23%). 80% of caregivers lived in the same home as patients. Caregivers were asked about all the items of the grid Zarit. The average burden in our sample is 59.9 + 16 3. We observed that 33% have absent to light burden (score <21), 10% have a light to moderate burden (between 21 and 40), 36, 66% have moderate to severe burden (between 41 and 60) and 50% have a severe burden (>60), according to the classification proposed by Zarit. Sex, kinship and cohabitation with the patient were not associated with a higher burden.
Conclusion The study of factors correlated with high levels of burden aims at finding ways of intervention and support to fight against the isolation of caregivers and the occurrence of anxiodepressive complications.
Disclosure of interest The authors have not supplied their declaration of competing interest.

EV0768

Cognitive symptoms: The border between dementia and depression, a report of one case

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